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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,869	04/20/2007	Thomas Kothe	COZ-0535	7938

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EXAMINER	
SCOTT, ANGELA C	
ART UNIT	PAPER NUMBER
1796	
MAIL DATE	DELIVERY MODE
11/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/584,869	KOTHE ET AL.	
	Examiner	Art Unit	
	Angela C. Scott	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's response of August 14, 2008 has been fully considered. Claims 9-10 and 20 have been amended and claims 1-20 are pending.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-4, 6-12, 15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mills et al. (US 2002/0161071).

Regarding claims 1-4, 11-12, and 15, Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulphate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14). Taking into account the calcium oxide (lime) content of the calcium aluminate (¶¶24-25), the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition.

Regarding claims 6, 8 and 17, Mills et al. additionally teaches a method of applying a coating to a surface comprising forming a mixture of a cementitious composition (i) and an aqueous emulsion (ii), and spraying (putting) the mixture onto the surface to form a coating at least 2 mm in thickness (¶37 and claim 5).

Regarding claims 7 and 18-19, Mills et al. additionally teaches a method of applying a coating to a surface comprising forming a mixture of a cementitious composition (i) and a

dispersible organic polymer (iii), combining the mixture with an amount of water, and spraying the mixture onto the surface to form a coating at least 2 mm in thickness (¶37 and claim 6).

Regarding claims 9-10, Mills et al. additionally teaches using the coating of claim 8 as a rock support means (¶44) or to reduce or prevent weathering (waterproofing) (¶46).

Regarding claim 20, Mills et al. additionally teaches using the coating of claim 19 as a rock support means (¶44) or to reduce or prevent weathering (waterproofing) (¶46).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (US 2002/0161071) in view of Galer et al. (US 4,350,533).

Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulphate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14). Taking into account the calcium oxide (lime) content of the calcium aluminate (¶¶24-25), the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition.

Mills et al. does not teach that the water absorbing composition contains a stoichiometric surplus of lime. However, Galer et al. does teach cementitious composition comprising extraneous lime (Col. 4, lines 5-25). Mills et al. and Galer et al. are combinable because they are

from the same field of endeavor, namely cementitious compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use extraneous lime, as taught by Galer et al., in the composition, as taught by Mills et al., and would have been motivated to do so because Galer et al. teaches that its composition has an increased early strength (Col. 3, lines 50-60).

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (US 2002/0161071) in view of Matsuura et al. (JP 2001-163650).

Mills et al. teaches a settable composition comprising (i) a cementitious composition (water absorbing composition) comprising from 25 to 95% of calcium aluminate (part of the cementitious composition forming ettringite during hydration, ¶19), from 0 to 10% of lime, and from 0 to 50% of calcium sulphate (part of the cementitious composition forming ettringite during hydration, ¶19), where the proportions of the components are such that the composition on hydration is capable of absorbing at least its own weight of water, and (ii) an aqueous emulsion of an organic polymer, the amount of (ii) in relation to (i) being such as to provide a weight ratio of polymer solids to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably1:1 to 2.5:1, or (iii) an organic polymer in the form of a powder dispersible in water and where the amount of organic polymer is such as to give a weight ratio of polymer to combined weight of the ingredients of (i) of from 0.5:1 to 10:1, preferably 1:1 to 2.5:1 (¶¶ 7-14). Taking into account the calcium oxide (lime) content of the calcium aluminate (¶¶24-25), the overall lime content exceeds 13%, and can exceed 40% according to the disclosed amounts of the ingredients in the composition.

Mills et al. does not teach that the composition contains at least 62 weight % of lime. However, Matsuura et al. does teach a cement quick setting agent that can contain at least 62 weight % of lime when all of the components of the composition are taken together (Abstract). Mills et al. and Matsuura et al. are combinable because they are from the same field of endeavor, namely cementitious compositions. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use this amount of lime, as taught by Matsuura et al., in the composition, as taught by Mills et al., and would have been motivated to do so in order to increase the early strength of the composition.

Response to Arguments

Applicant's arguments filed August 14, 2008 have been fully considered but they are not persuasive.

a.) Applicant argues that the Office incorrectly characterized Mills by stating calcium aluminate "contains" lime because it contains both calcium and oxygen atoms. This is not the case and is unpersuasive. Mills states that the calcium aluminate may be provided by high alumina cement (¶17). Mills goes on to say that by high alumina cement, they mean a cement which contains not less than 32% by weight of alumina and has an alumina to calcium oxide ratio of between 0.85 and 1.3:1. A typical analysis of such a cement is 38.5% by weight calcium oxide (¶24-25). If 10% lime and 90% calcium aluminate provided by high alumina cement are used to compose the cementitious composition, then the composition contains about 44% lime. This is what is meant by the "calcium oxide content of the calcium aluminate" mentioned above and previously.

b.) Applicant argues that Mills teaches away from any use of lime in amounts greater than 10% by weight. This is also not the case and is unpersuasive. Please see above for a discussion of why Mills is thought to teach that more than 10% by weight of lime can be present in the cementitious composition. Additionally, a proper teaching away would specifically state that to include more than the amount of lime taught by Mills would be detrimental to the invention and why that is so. Mills makes no statement such as that.

c.) Applicant argues that Matsuura does not teach a composition that can contain at least 62% by weight lime. This argument is unpersuasive. Matsuura teaches that the composition may contain 62 weight percent lime. The claim language requires that the composition contain at least 62 weight percent lime, which includes 62% as the minimum. The claim overlaps with this teaching, even if it is at only one point. Therefore, this limitation is taught in Matsuura.

d.) Applicant further argues the Matsuura reference stating that the examples in Matsuura only use lime up to 19% by weight. This argument is also unpersuasive. A reference is used for all that it teaches, not only preferred embodiments.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/A. C. S./
Examiner, Art Unit 1796